

Title (en)

OIL LUBRICATION MECHANISM FOR FRONT BEARING OF WATER-COOLED MOTOR AND MOTOR DRIVING ASSEMBLY

Title (de)

ÖLSCHMIERMECHANISMUS FÜR EIN VORDERES LAGER EINES WASSERGEKÜHLTEN MOTORS UND MOTORANTRIEBSVORRICHTUNG

Title (fr)

MÉCANISME DE LUBRIFICATION À L'HUILE POUR PALIER AVANT DE MOTEUR REFROIDI À L'EAU, ET ENSEMBLE D'ENTRAÎNEMENT DE MOTEUR

Publication

EP 3892892 A4 20211222 (EN)

Application

EP 19899179 A 20191211

Priority

- CN 201811548562 A 20181218
- CN 2019124578 W 20191211

Abstract (en)

[origin: EP3892892A1] The present disclosure discloses an oil-lubrication mechanism for a fore bearing of a water-cooled electric motor (1) and an electric-motor driving assembly, which solves the problems of conventional grease lubrication of the fore bearing of water-cooled electric motors (1) such as serious bearing heat generation and bearing failure and low life caused by easy outflowing of the grease. The oil-lubrication mechanism includes a gear-splashing oil-storage structure provided in a gearbox or a reduction gearbox, and a bearing-baffle oil-storage structure provided at a front end of the water-cooled electric motor; and a gear in the gearbox or the reduction gearbox in operation throws a lubricating oil into the gear-splashing oil-storage structure, and the lubricating oil is delivered via the oil conduit (9) into the bearing-baffle oil-storage structure, thereby lubricating the fore bearing of the water-cooled electric motor, and subsequently the lubricating oil flows back into the gearbox or the reduction gearbox via the oil return tube (3). In the present disclosure, the lubricating oil that splashes inside the gearbox or the reduction gearbox is introduced into the fore bearing of the water-cooled electric motor (1), which enables the fore bearing of the water-cooled electric motor to be lubricated by the oil, thereby reducing the heat generation of the fore bearing of the water-cooled electric motor (1), and improving the life of the fore bearing and the reliability of the electric motor.

IPC 8 full level

F16H 57/04 (2010.01); **B60K 11/02** (2006.01); **H02K 9/19** (2006.01)

CPC (source: CN EP US)

F16C 33/6659 (2013.01 - US); **F16C 33/6685** (2013.01 - US); **F16H 57/0412** (2013.01 - CN); **F16H 57/0423** (2013.01 - EP US); **F16H 57/045** (2013.01 - EP US); **F16H 57/0457** (2013.01 - CN US); **F16H 57/0471** (2013.01 - EP); **F16H 57/0476** (2013.01 - EP US); **F16H 57/0457** (2013.01 - EP)

Citation (search report)

- [A] FR 2740853 A1 19970509 - PEUGEOT [FR]
- [A] DD 223205 A1 19850605 - IFA GETRIEBWERKE BRANDENBURG [DD]
- [A] GB 757480 A 19560919 - ASEA AB
- [A] CN 108561542 A 20180921 - HEFEI JUYI POWER SYSTEM CO LTD
- See also references of WO 2020125514A1

Cited by

EP4166818A1; FR3128165A1; DE102022125100A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 3892892 A1 20211013; **EP 3892892 A4 20211222**; **EP 3892892 B1 20230517**; CN 109538743 A 20190329; CN 109538743 B 20240326; JP 2022508386 A 20220119; JP 7030249 B2 20220304; US 11619297 B2 20230404; US 2022042591 A1 20220210; WO 2020125514 A1 20200625

DOCDB simple family (application)

EP 19899179 A 20191211; CN 201811548562 A 20181218; CN 2019124578 W 20191211; JP 2021535164 A 20191211; US 201917415739 A 20191211